



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

KU

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,693	09/17/2003	Ravinder Aggarwal	ASMEX.358DV1	6237
20995	7590	06/06/2005	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614				ADAMS, GREGORY W
		ART UNIT		PAPER NUMBER
		3652		

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/665,693	AGGARWAL ET AL.	
	Examiner	Art Unit	
	Gregory W. Adams	3652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 March 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-23 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-23 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Hofmeister (US 6,481,956).

With respect to claim 1, Hofmeister discloses a tool comprising a first substrate handling chamber 13, front docking port 24 on the outside of a first substrate handling chamber 13, robot arm 32 in a first substrate handling chamber 13, loadlock chamber 16, buffer station B1-4 located between a loadlock chamber 16, and a front docking port 24, cassette 34, buffer station rack B1-4, buffer station rack shelves (col. 3, Ins. 30-40), and a buffer station rack which holds wafers.

With respect to claim 2, Hofmeister discloses a tool further comprising a buffer station rack B1-4 that holds 300mm wafers.

With respect to claim 3, Hofmeister discloses a tool further comprising a rear substrate handling chamber 11 where a loadlock chamber 16 is between a first substrate handling chamber 13 and a rear substrate handling chamber 15. With respect to "between", this may be interpreted as a physical limitation, i.e. where it is located in a physical relationship to its surroundings, or may also be considered in a procedural

limitation, i.e. a wafer is placed in a buffer while moving between a processing step and a storage step. www.dictionary.com.

With respect to claim 4, Hofmeister discloses a tool wherein a buffer station B1-4 has an inert environment. It is noted that this may be an open cassette or a closed cassette.

With respect to claim 5, Hofmeister discloses a buffer station B1-4 is purged.

With respect to claim 6, Hofmeister discloses a buffer station B1-4 is configured as an isolated environment.

With respect to claim 7, Hofmeister discloses a buffer station B1-4 with an internal volume. It is noted that a cassette functioning as a buffer station has an internal volume bounding by the cassette.

With respect to claim 8, Hofmeister discloses a buffer station rack B1-4 holds twenty-five 300mm wafers. Col. 3, Ins. 5-20. It is noted that without a specific need pertaining to applicant's invention, a finite quantity of a specific dimension is not a patentable distinction.

With respect to claim 8, Hofmeister discloses a loadlock chamber 16 has internal volume less than or equal to 9.156 liters.

With respect to claim 10, Hofmeister discloses a buffer station rack shelves have a reduced pitch relative to FOUP shelves. It is noted that Hofmeister discloses variable spacing depending on the amount of wafer holding shelves required in the buffer.

With respect to claim 11, Hofmeister discloses a robot arm 38,40,42 including a variable pitch end effector 46 and end effector shelves. Col. 4, Ins. 5-30.

Art Unit: 3652

With respect to claim 12, Hofmeister discloses a substrate handling chamber 13 has atmosphere.

With respect to claim 13, Hofmeister discloses a substrate handling chamber has reduced pressure.

2. Claims 14-16, 18-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiroki (US 5,989,346).

With respect to claim 14, referring to FIGS. 1-12 Hiroki '346 discloses a semiconductor processing tool 1 comprising a substrate handling chamber 5, docking port 9b, cassette 42, cassette rack, col. 1, Ins. 49-51, buffer station 70, buffer station rack 72,74,76,78, buffer station rack slots 79.

With respect to claim 15, Hiroki '346 discloses a load lock chamber 3 having a load lock chamber rack 31.

With respect to claim 16, Hiroki '346 discloses a rear substrate handling chamber 4. It is noted that Hiroki is not limited to requiring a robot arm within a handling chamber, only that the arm is capable.

With respect to claim 18, Hiroki '346 discloses a load lock chamber rack 31 for holding 300mm wafers.

With respect to claim 19, Hiroki '346 discloses a substrate handling chamber 5 at standard atmosphere pressure. Col. 7, Ins. 21-22.

With respect to claim 20, Hiroki '346 discloses a substrate handling chamber 5 at reduced pressure. Col. 7, Ins. 21-22.

With respect to claim 21, Hiroki '346 discloses a buffer station rack 72,74,76,78 with reduced relative spacing between rack slots 79.

With respect to claim 22, Hiroki '346 discloses a buffer station rack 31 at reduced pitch rack 31, accessed by robot arm 60a. Col. 6, Ins. 47-53.

With respect to claim 23, Hiroki '346 discloses a robot arm 60a, end effectors for transferring substrates. Col. 12, Ins. 5-10.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmeister (US 6,481,956). Referring to FIGS. 1-12 Hiroki '346 discloses a load lock chamber 3 limited to 1 to 7 substrates. Hiroki teaches holding a predetermined number of substrates based on processing needs. Col. 6, Ins. 15-45. It would have been obvious to one having ordinary skill in the art at the time the invention was made to limit the load lock chamber 3 to 1 to 7 substrates, as per the teachings of Hiroki, to hold a predetermined number of substrates based on processing needs.

Response to Arguments

5. Applicant's arguments filed on March 24, 2005 with respect to claim 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory W. Adams whose telephone number is (571) 272-8101. The examiner can normally be reached on M-Th, 8:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on (571) 272-6928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GWA



EILEEN D. LILLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600